

4.2.E. 0604000305 (Duck River).

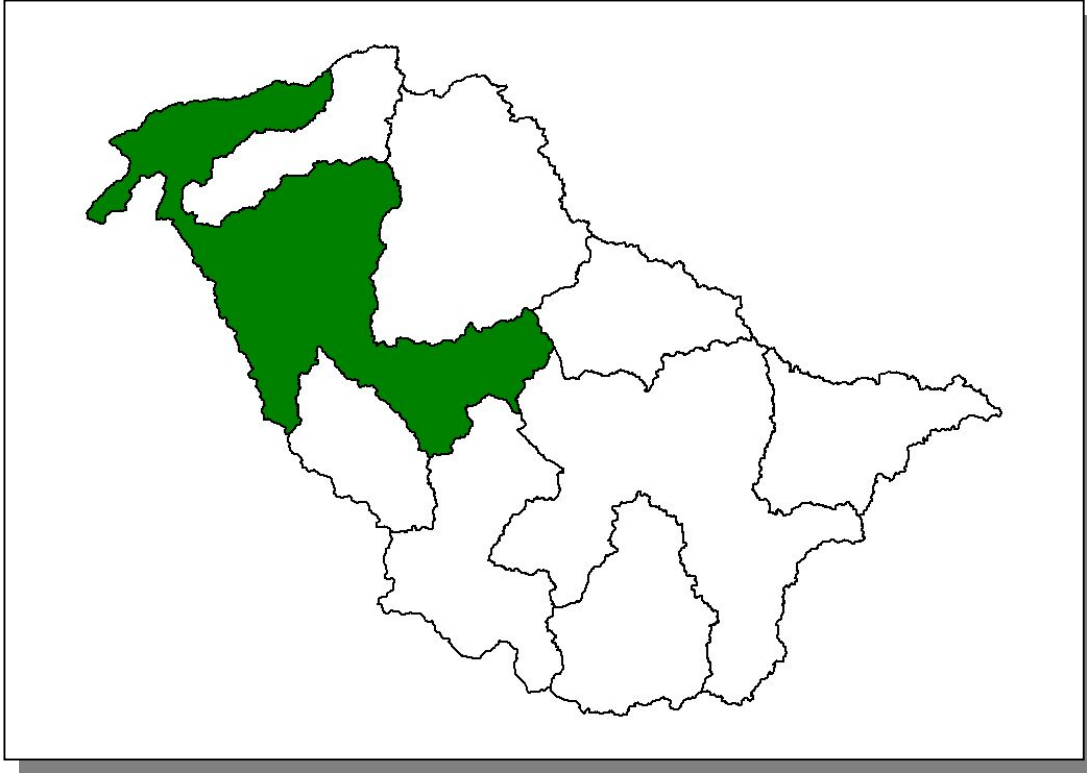


Figure 4-49. Location of Subwatershed 0604000305. All Lower Duck HUC-10 subwatershed boundaries are shown for reference.

4.2.E.i. General Description.

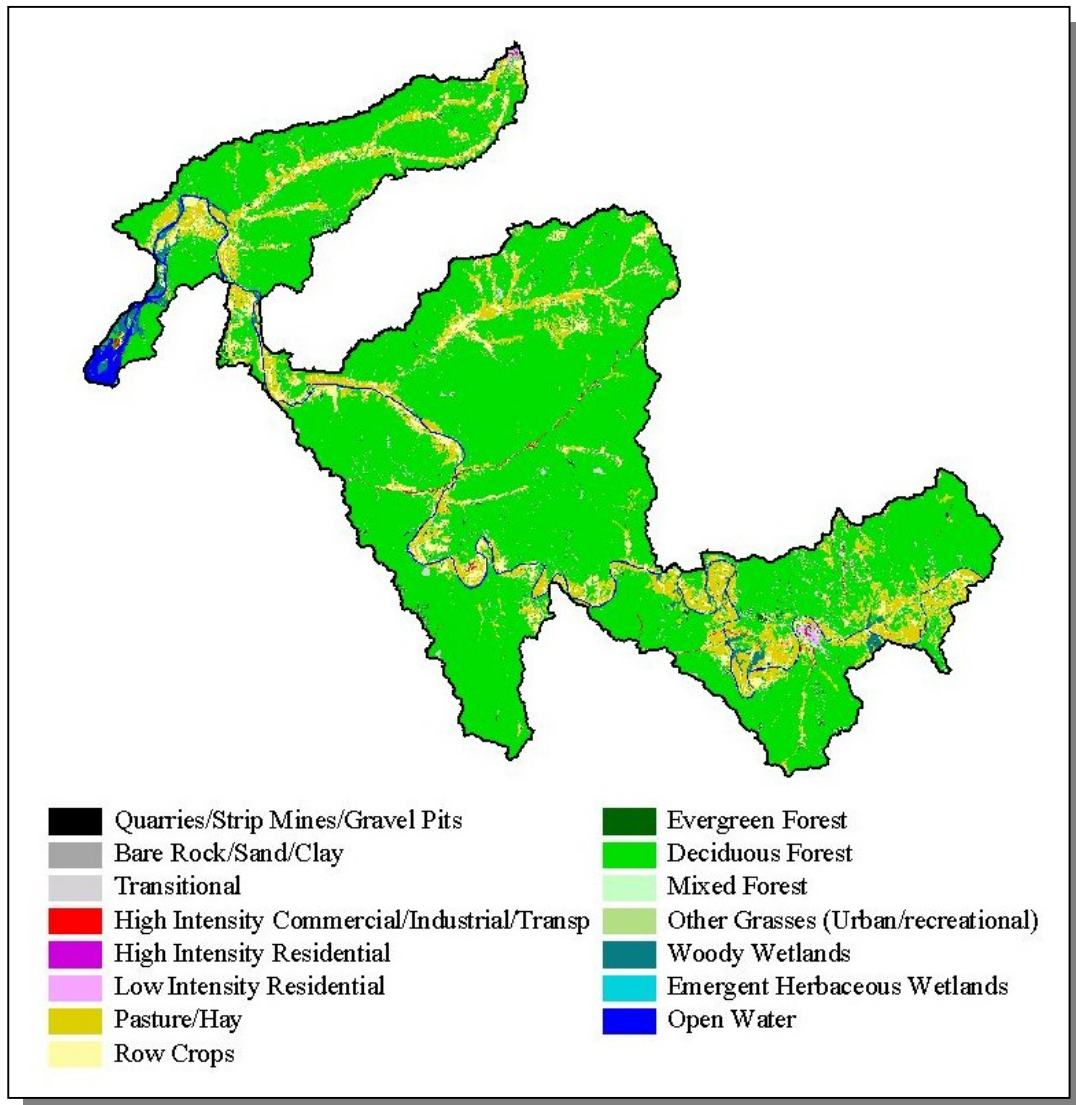


Figure 4-50. Illustration of Land Use Distribution in Subwatershed 0604000305.

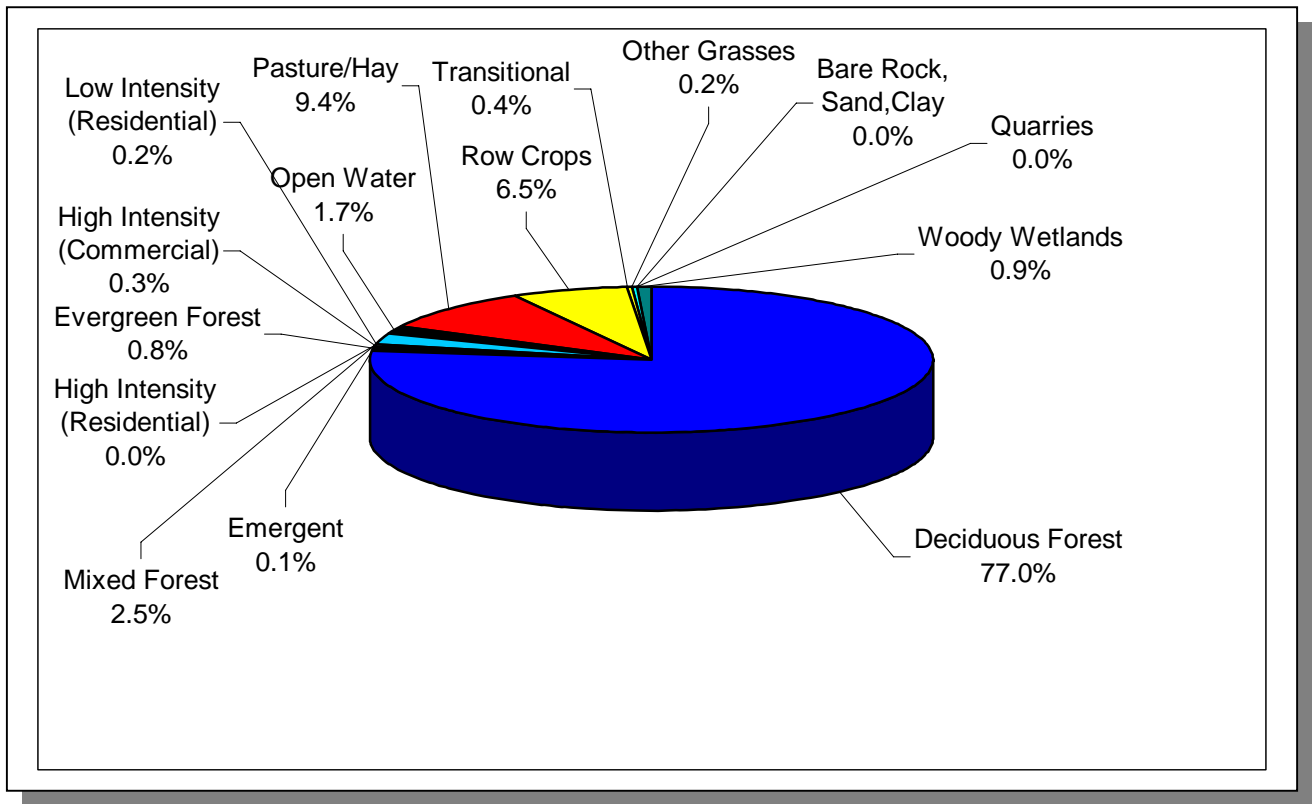


Figure 4-51. Land Use Distribution in Subwatershed 0604000305. More information is provided in Appendix IV.

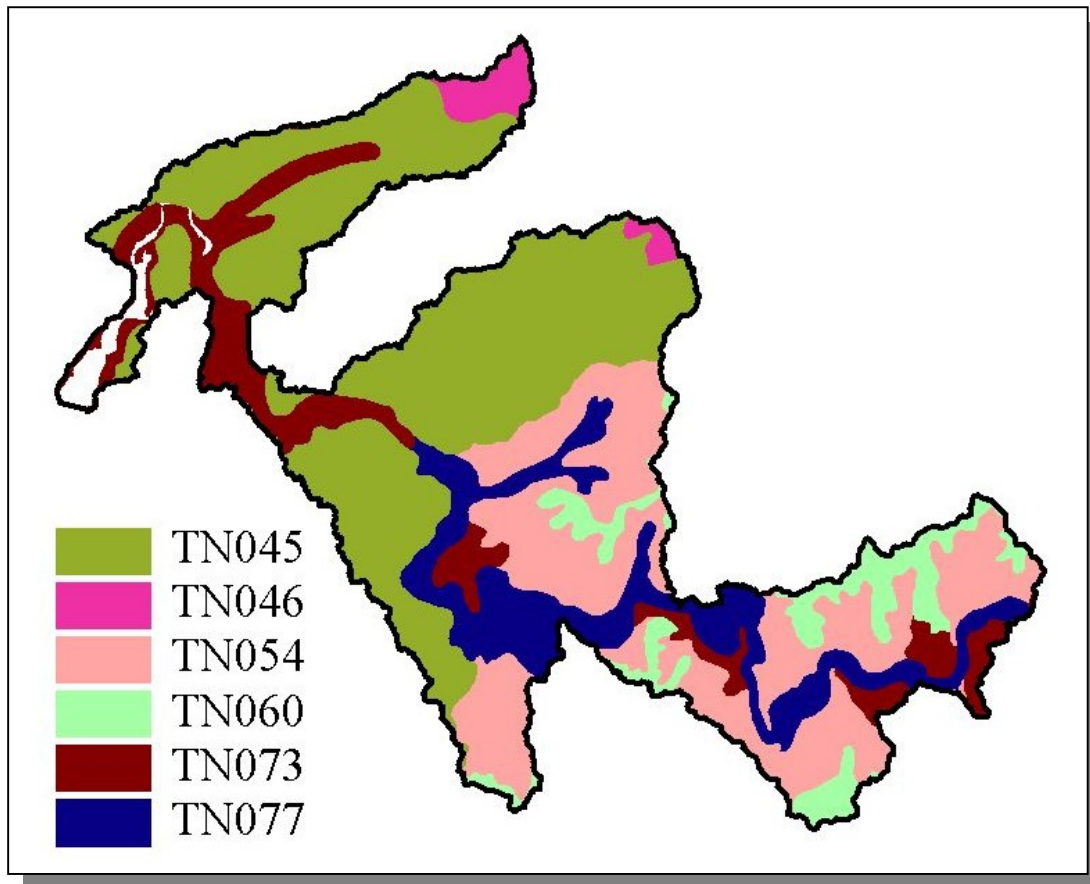


Figure 4-52. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000305.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN045	0.00	B	1.95	5.45	Loam	0.35
TN046	0.00	B	1.98	5.09	Silty Loam	0.38
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN073	0.00	B	2.97	5.21	Loam	0.34
TN077	4.00	C	2.16	5.03	Loam	0.34

Table 4-25. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000305. More information is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-1997)
	1990	1997	2000		1990	1997	2000	
Hickman	16,754	19,926	22,295	28.19	4,722	5,617	6,284	33.1
Humphreys	15,795	16,839	17,929	27.49	4,341	4,628	4,928	13.5
Perry	6,612	7,438	7,631	0.89	59	67	68	15.3
Totals	39,161	44,203	47,855		9,122	10,312	11,280	23.7

Table 4-26. Population Estimates in Subwatershed 0604000305.

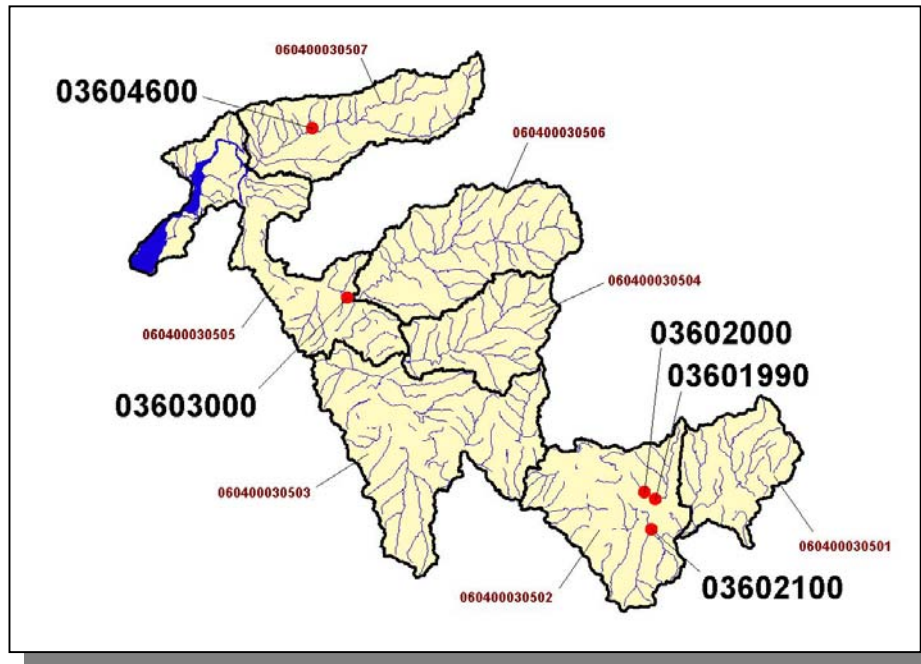


Figure 4-53. Location of Historical Streamflow Data Collection Sites in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506 and 060400030507 boundaries are shown for reference. More information is provided in Appendix IV.

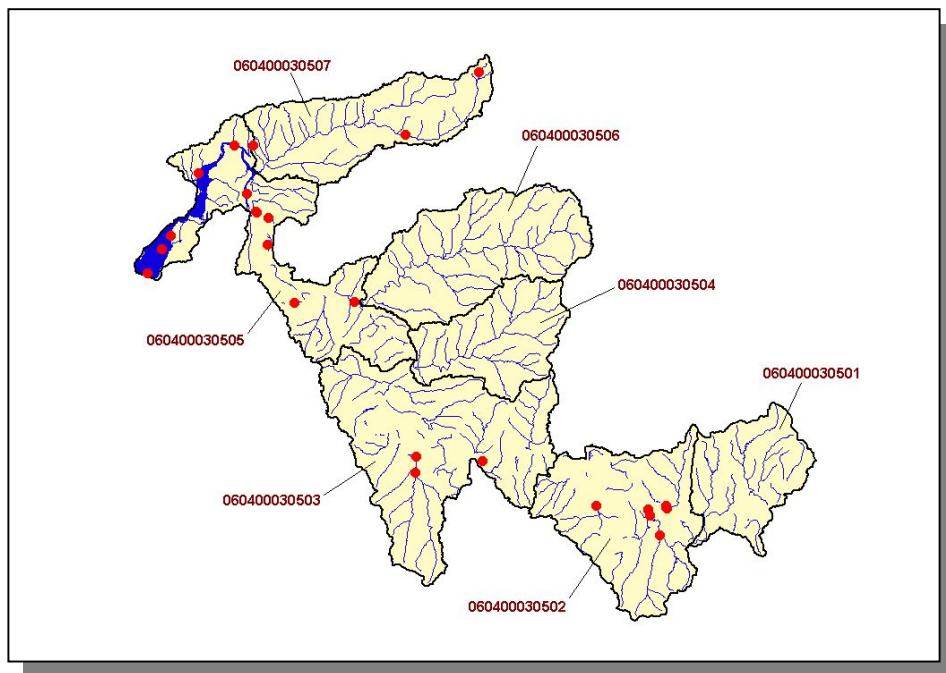


Figure 4-54. Location of STORET Monitoring Sites in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506 and 060400030507 boundaries are shown for reference. More information, including site names and locations, is provided in Appendix IV.

4.2.E.ii. Point Source Contributions.

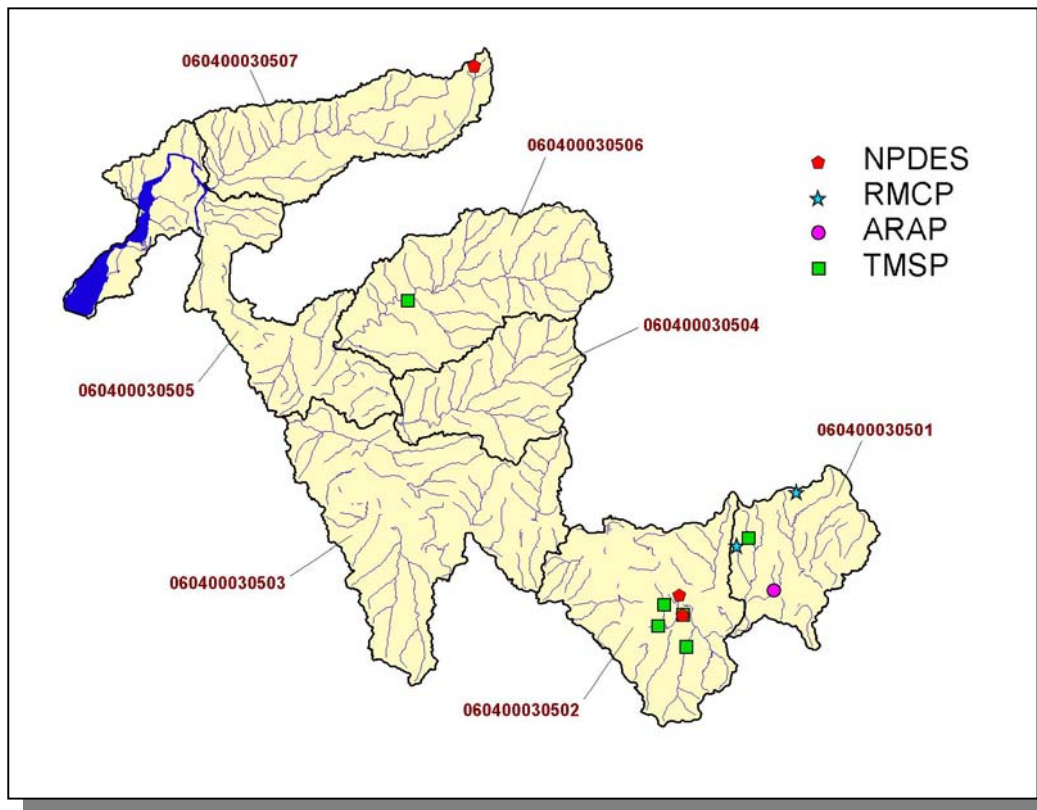


Figure 4-55. Location of NPDES Facilities in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

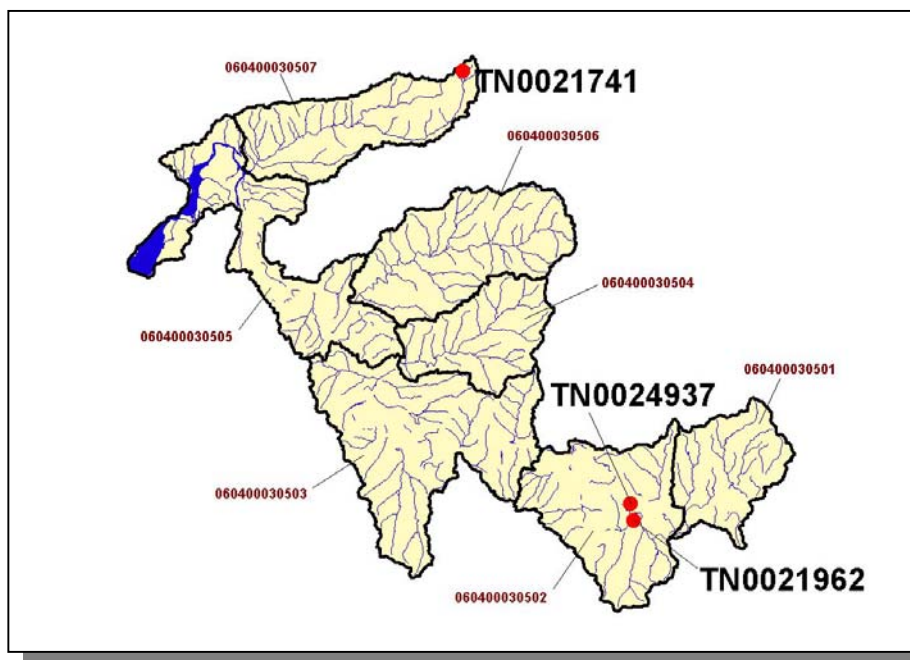


Figure 4-56. Location of NPDES Facilities in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

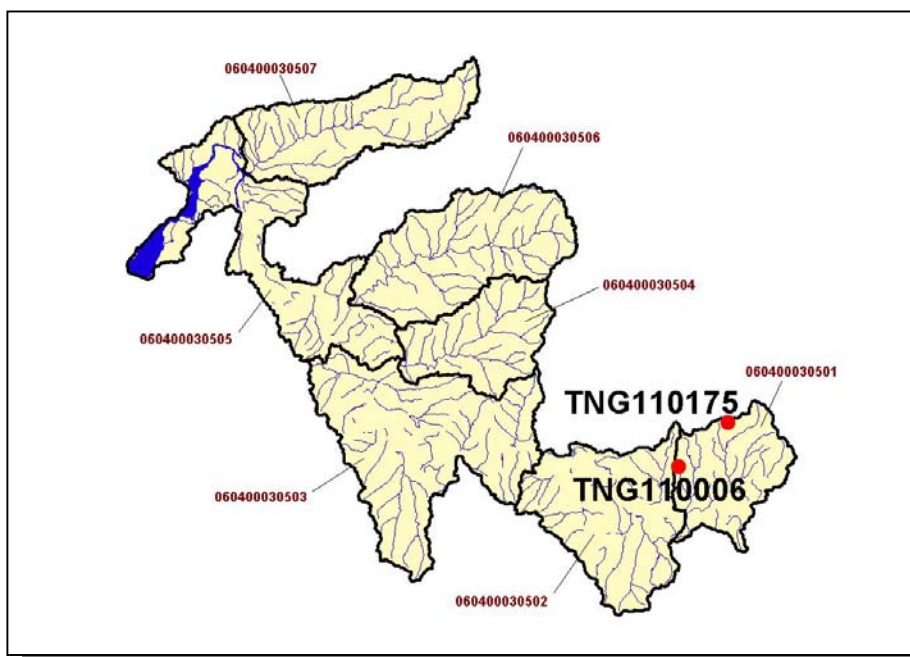


Figure 4-57. Location of Ready Mix Concrete Plants in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

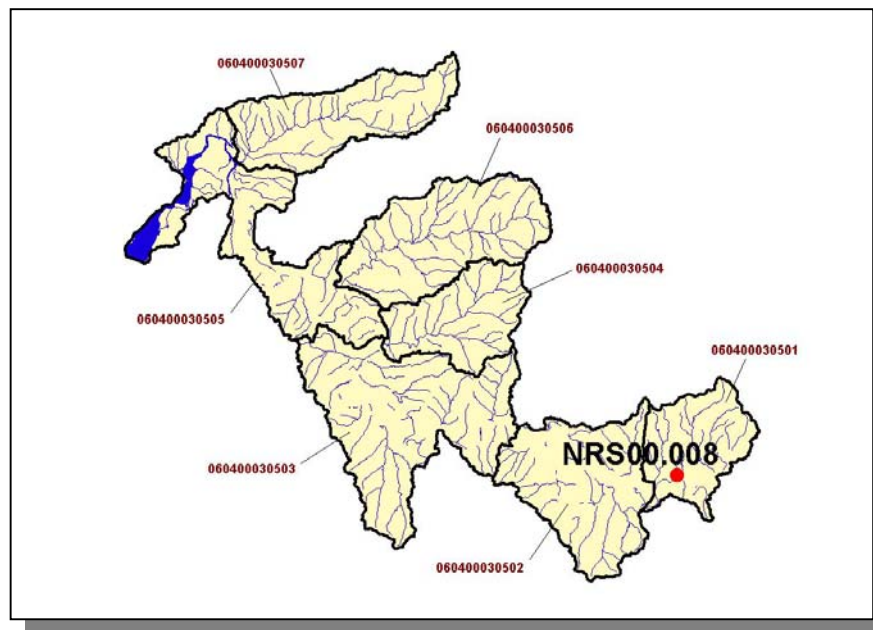


Figure 4-58. Location of ARAP Sites (Individual Permits) in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

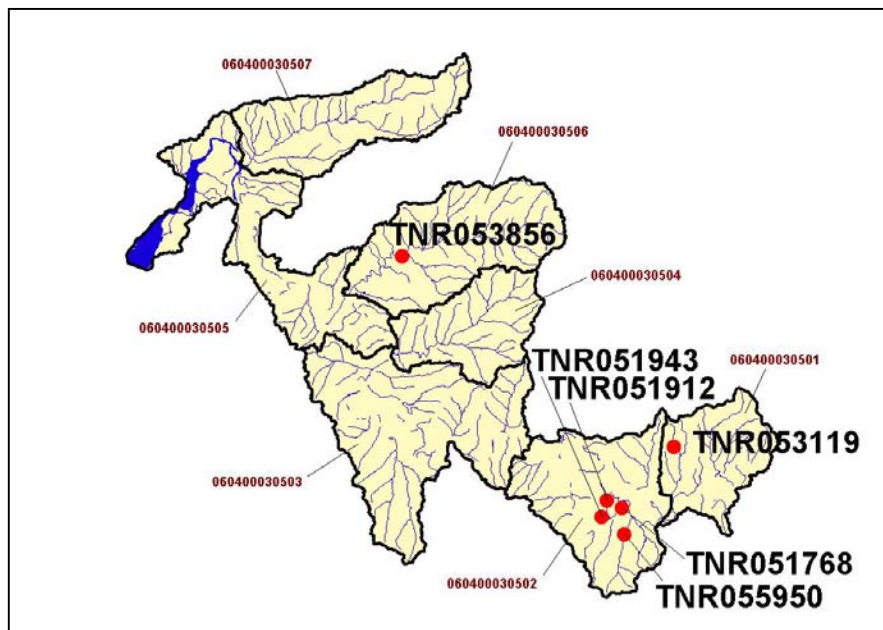


Figure 4-59. Location of TMSP Facilities in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

4.2.E.ii.a. Dischargers to Water Bodies Listed on the 2002 303(d) List

There is one NPDES facility discharging to water bodies listed on the 2002 303(d) list in Subwatershed 0604000305:

- TN0021741 (McEwen STP) discharges to Blue Creek @ RM 16.2

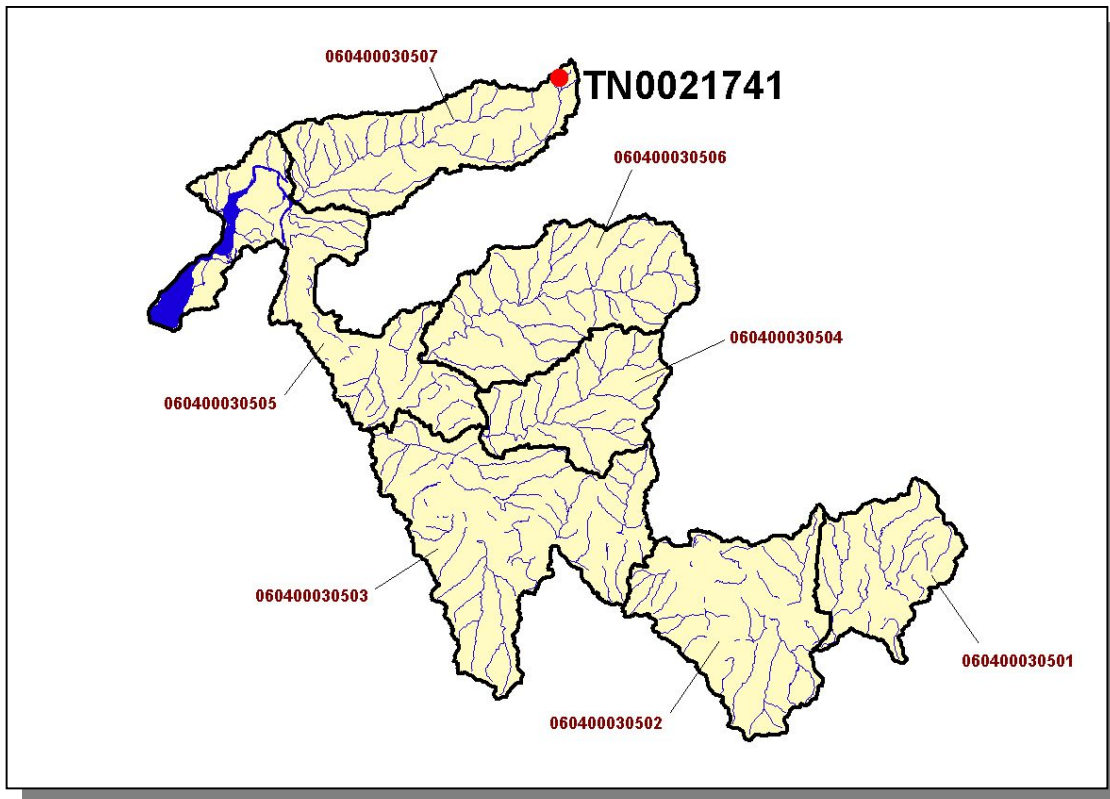


Figure 4-60. Location of NPDES Dischargers to Water Bodies Listed on the 2002 303(d) List in Subwatershed 0604000305. Subwatershed 060400030501, 060400030502, 060400030503, 060400030504, 060400030505, 060400030506, and 060400030507 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0021741	8.2	8.3	8.4	7.5	0.45

Table 4-27. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000305. Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	NO ₂ + NO ₃	TOTAL P	TOTAL ORGANIC N
TN0021741	X	X	X

Table 4-28. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000305.

PERMIT #	WET	CBOD ₅	NH ₃	Pb	Cu	Se	TSS	DO	pH
TN0021741	X	X	X	X	X	X	X	X	X

Table 4-29. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000305. WET, Whole Effluent Toxicity; CBOD₅, Carbonaceous Biochemical Oxygen Demand (5-Day); TSS, Total Suspended Solids.

PERMIT #	2,4,6-TRICHLOROPHENOL
TN0021741	X

Table 4-30. Organic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000305.

4.2.E.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens (Layers)	Chickens Sold	Hogs	Sheep
6,077	115	11,904	21	<5	1,355	14

Table 4-31. Summary of Livestock Count Estimates in Subwatershed 0604000305. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hickman	297.2	297.2	5.8	23.0
Humphreys	241.2	241.2	3.7	14.4
Perry	223.6	223.6	5.1	22.0
Totals	762.0	762.0	14.6	59.4

Table 4-32. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0604000305.

CROPS	TONS/ACRE/YEAR
Legume (Pastureland)	0.68
Grass (Pastureland)	1.28
Grass (Hayland)	0.18
Legumes (Hayland)	1.50
Legumes, Grass (Hayland)	0.19
Grass, Forbs, Legumes (Mixed Pasture)	1.06
Forest Land (Not Grazed)	0.00
Forest Land (Grazed)	0.00
Corn (Row Crops)	24.88
Sorghum (Row Crops)	5.76
Soybeans (Row Crops)	13.83
Tobacco (Row Crops)	7.68
Conservation Reserve Program Lands	0.44
Non-Agricultural Land Use	0.00
Other Land in Farms	0.06
Farmsteads and Ranch Headquarters	0.31

Table 4-33. Annual Estimated Soil Loss in Subwatershed 0604000305.